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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/035,513	10/19/2001	William L. Detore	TY2002US	3091

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12/19/2002

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EXAMINER

JOHNSON, VICKY A

ART UNIT

PAPER NUMBER

3682

DATE MAILED: 12/19/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/035,513

Applicant(s)

DETORE ET AL.

Examiner

Vicky A. Johnson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) 2-4 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1 and 5-7 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1 and 5-7, drawn to a flywheel, classified in class 74, subclass 572.
- II. Claims 2-4, drawn to a fabrication method, classified in class 242, subclass 430.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product as claimed can be made by another process such as not winding.

3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

4. During a telephone conversation with J Michael Neary on December 12, 2002 a provisional election was made with traverse to prosecute the invention of Group I, claims 1 and 5-7. Affirmation of this election must be made by applicant in replying to this Office action. Claims 2-4 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

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5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1, 5 and 6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. Claim 1 recites the limitation "the other fiber" in line 5. There is insufficient antecedent basis for this limitation in the claim.

9. Claim 5 recites the limitation "the other fiber" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United

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States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

11. Claims 1 and 5-7 are rejected under 35 U.S.C. 102(e) as being anticipated by Kimura et al (US 6,299,718).

Kimura et al disclose a hybrid composite flywheel rim comprising: at least two different types of fibers (col. 6 lines 26-31) impregnated with a thermosetting resin such as epoxy resin (col. 5 lines 42-53), said two different fibers having different elastic moduli (col.6 lines 31-36); one of said two fiber types being randomly distributed amongst the other fiber macroscopically (col. 2 lines 43-54).

The method of forming the device is not germane to the issue of Patentability of the device itself. Therefore, the limitation "wound in an annulus on a mandrel" has not been given any patentable weight.

Re claim 5, fibers having different elastic moduli (col.6 lines 31-36), said fibers including carbon fiber, glass fiber (col. 6 lines 26-31), said fibers fixed in a matrix of thermosetting resin such as epoxy resin (col. 5 lines 42-53); said carbon fiber is distributed amongst the other fiber in a cross hatch pattern macroscopically.

Re claim 6, Kimura et al disclose a hybrid composite flywheel rim as claimed except for the following equation being satisfied: $WL=(N + B/A) \cdot LR$. It would have been obvious to one having ordinary skill in the art at the time the invention was made to optimize the strength of the flywheel, since has been held to be with in the general skill of a worker in the art to achieve optimization through routine experimentation. *In re Boesch*, 205 USPQ 215 (CCPA 1980); *In re Svala*, 70 USPQ 412 (CCPA 1946).

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Re claim 7, an annular structure having a plurality of zones (col. 9 lines 4-31), each with multiple fiber layers in a resin matrix (col. 6 lines 26-31), each said fiber layer having a mixture of carbon fiber tows and glass fiber tows at a ratio of tows that is constant in each layer of any single zone (col. 9 lines 4-31), and said ratio incrementally increases zone-by-zone radially toward outside zones of said rim (col. 9 lines 11-30).

The method of forming the device is not germane to the issue of Patentability of the device itself. Therefore, the limitation "carbon fiber tows lie in a macroscopically uniform distribution in each zone by controlling the correlation between lead rate of the fiber band as it is wound onto the mandrel per mandrel revolution and the winding length" has not been given any patentable weight.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

3,602,067	Wetherbee Jr.	(flywheel)
6,029,350	Maass et al	(2 fibers)
5,285,699	Walls et al	(composite)
6,247,382	Umeki et al	(composite)
4,370,899	Swartout	(composite)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vicky A. Johnson whose telephone number is (703) 305-3013. The examiner can normally be reached on Monday-Thursday (7:00a-5:00p).


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Bucci can be reached on (703) 308-3668. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7687 for regular communications and (703) 305-7687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

vaj

12/13/02
December 13, 2002


DAVID A. BUCCI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600